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(12) United States Patent
Zeller et al.**(10) Patent No.: US 9,890,211 B2****(45) Date of Patent: *Feb. 13, 2018****(54) ANTAGONIST ANTIBODIES DIRECTED AGAINST CALCITONIN GENE-RELATED PEPTIDE***C07K 2317/33* (2013.01); *C07K 2317/34* (2013.01); *C07K 2317/55* (2013.01); *C07K 2317/565* (2013.01); *C07K 2317/567* (2013.01); *C07K 2317/70* (2013.01); *C07K 2317/76* (2013.01); *C07K 2317/92* (2013.01); *C07K 2317/94* (2013.01)**(71) Applicant: Teva Pharmaceuticals International GmbH, Jona (CH)****(72) Inventors: Joerg Zeller**, Ann Arbor, MI (US); **Kristian T. Poulsen**, San Francisco, CA (US); **Yasmina Noubia Abdiche**, Mountain View, CA (US); **Jaume Pons**, San Bruno, CA (US); **Sierra Jones Collier**, Menlo Park, CA (US); **Arnon Rosenthal**, Woodside, CA (US)**(58) Field of Classification Search**

None

See application file for complete search history.

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Related U.S. Application Data

(60) Continuation of application No. 15/147,265, filed on May 5, 2016, which is a continuation of application No. 15/044,552, filed on Feb. 16, 2016, now Pat. No. 9,365,648, which is a continuation of application No. 14/719,015, filed on May 21, 2015, now Pat. No. 9,328,168, which is a continuation of application No. 14/251,925, filed on Apr. 14, 2014, now Pat. No. 9,115,194, which is a continuation of application No. 14/086,816, filed on Nov. 21, 2013, now Pat. No. 8,734,802, which is a continuation of application No. 13/870,871, filed on Apr. 25, 2013, now Pat. No. 8,597,649, which is a continuation of application No. 13/179,846, filed on Jul. 11, 2011, now Pat. No. 8,586,045, which is a division of application No. 12/093,638, filed as application No. PCT/IB2006/003181 on Nov. 2, 2006, now Pat. No. 8,007,794.

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The invention features methods for preventing or treating CGRP associated disorders such as vasomotor symptoms, including headaches (e.g., migraine, cluster headache, and tension headache) and hot flushes, by administering an anti-CGRP antagonist antibody. Antagonist antibody G1 and antibodies derived from G1 directed to CGRP are also described.

15 Claims, 16 Drawing Sheets